CLAIMS

1.   An encrypting apparatus for encrypting at least one of encoded image data, audio data, and text data, said encrypting apparatus comprising:

5   a file reading unit operable to obtain a file which has a data section including the encoded image data, audio data, and text data and a header section including a header of the data section;

an encrypting unit operable to encrypt at least one of the encoded image data, audio data, and text data included in the data

10   section of the file;

a header analyzing unit operable to analyze the header section of the file and to obtain a value described in a field that is included in the header section to show an encoding method used for data to be encrypted by said encrypting unit;

15   a header converting unit operable to convert the obtained value according to a predetermined conversion rule and to replace the value described in the field with the converted value; and

a file outputting unit operable to output a file having a header section including a field in which the value has been

20   replaced and a data section including the encrypted data.

2.   The encrypting apparatus according to Claim 1,

wherein said header converting unit is operable to convert the obtained value through a bit inversion.

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3.   The encrypting apparatus according to Claim 2,

wherein said header converting unit is operable to change a bit position in the obtained value at which the bit inversion is to be performed, according to an encrypting method used by said

30   encrypting unit.

4.   The encrypting apparatus according to Claim 2,

wherein said header converting unit is operable to change a bit inversion formula to be used for the bit inversion, according to an encrypting method used by said encrypting unit.

5   5.   The encrypting apparatus according to Claim 1,
       wherein the conversion rule is represented by a conversion table in which the obtained value is recorded in association with the converted value.

10   6.   A decrypting apparatus for decrypting encrypted data, the encrypted data being at least one of encoded image data, audio data, and text data, said decrypting apparatus comprising:
       a file reading unit operable to obtain a file which has a data section including the encoded image data, audio data, and text

15   data and a header section including a header of the data section;
       a header analyzing unit operable to analyze the header section of the file and to obtain a value described in a field that is included in the header section to show an encoding method used for the encrypted data and information regarding encryption;

20   a header converting unit operable to convert the obtained value according to a predetermined conversion rule and to replace the value described in the field with the converted value;
       a decrypting unit operable to decrypt the encrypted data out of the encoded image data, audio data, and the text data included

25   in the data section of the file; and
       a file outputting unit operable to output a file having a header section including a field in which the value has been replaced and a data section including the decrypted data.

30   7.   The decrypting apparatus according to Claim 6,
       wherein said header converting unit is operable to convert the obtained value through a bit inversion.

8.   The decrypting apparatus according to Claim 7,
        wherein said header converting unit is operable to change a
bit position in the obtained value at which the bit inversion is to be
5   performed, according to the information regarding the encryption.

9.   The decrypting apparatus according to Claim 7,
        wherein said header converting unit is operable to change a
bit inversion formula to be used for the bit inversion, according to
10   the information regarding the encryption.

10.   The decrypting apparatus according to Claim 6,
        wherein the conversion rule is represented by a conversion
table in which the obtained value is recorded in association with the
15   converted value.

11.   A data reproducing apparatus for decrypting and decoding
encrypted data for reproduction, the encrypted data being at least
one of encoded image data, audio data, and text data, said data
20   reproducing apparatus comprising:
        a file reading unit operable to obtain a file which has a data
section including the encoded image data, audio data, and text
data and a header section including a header of the data section;
        a header analyzing unit operable to analyze the header
25   section of the file and to obtain a value described in a field that is
included in the header section to show an encoding method used
for the encrypted data and information regarding encryption;
        a header converting unit operable to convert the obtained
value according to a predetermined conversion rule and to replace
30   the value described in the field with the converted value;
        a decrypting unit operable to decrypt the encrypted data out
of the encoded image data, audio data, and the text data included

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in the data section of the file; and

a decoding unit operable to determine the encoding method used for the data by reference to the field in which the value has been replaced and to decode the decrypted data.

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12. The data reproducing apparatus according to Claim 11,
wherein said header converting unit is operable to convert the obtained value through a bit inversion.

10 13. The data reproducing apparatus according to Claim 12,
wherein said header converting unit is operable to change a bit position in the obtained value at which the bit inversion is to be performed, according to the information regarding the encryption.

15 14. The data reproducing apparatus according to Claim 12,
wherein said header converting unit is operable to change a bit inversion formula to be used for the bit inversion, according to the information regarding the encryption.

20 15. The data reproducing apparatus according to Claim 11,
wherein the conversion rule is represented by a conversion table in which the obtained value is recorded in association with the converted value.

25 16. An encrypting method of encrypting at least one of encoded image data, audio data, and text data, comprising:

a file reading step of obtaining a file which has a data section including the encoded image data, audio data, and text data and a header section including a header of the data section;

30 an encrypting step of encrypting at least one of the encoded image data, audio data, and text data included in the data section of the file;

a header analyzing step of analyzing the header section of the file and obtaining a value described in a field that is included in the header section to show an encoding method used for data to be encrypted in said encrypting step;

5   a header converting step of converting the obtained value according to a predetermined conversion rule and replacing the value described in the field with the converted value; and

a file outputting step of outputting a file having a header section including a field in which the value has been replaced and

10   a data section including the encrypted data.

17.   A decrypting method of decrypting encrypted data, the encrypted data being at least one of encoded image data, audio data, and text data, said decrypting method comprising:

15   a file reading step of obtaining a file which has a data section including the encoded image data, audio data, and text data and a header section including a header of the data section;

a header analyzing step of analyzing the header section of the file and obtaining a value described in a field that is included in

20   the header section to show an encoding method used for the encrypted data and information regarding encryption;

a header converting step of converting the obtained value according to a predetermined conversion rule and replacing the value described in the field with the converted value;

25   a decrypting step of decrypting the encrypted data out of the encoded image data, audio data, and the text data included in the data section of the file; and

a file outputting step of outputting a file having a header section including a field in which the value has been replaced and

30   a data section including the decrypted data.

18.   A data reproducing method of decrypting and decoding

encrypted data for reproduction, the encrypted data being at least one of encoded image data, audio data, and text data, said data reproducing method comprising:

a file reading step of obtaining a file which has a data section
5   including the encoded image data, audio data, and text data and a header section including a header of the data section;

a header analyzing step of analyzing the header section of the file and obtaining a value described in a field that is included in the header section to show an encoding method used for the
10   encrypted data and information regarding encryption;

a header converting step of converting the obtained value according to a predetermined conversion rule and replacing the value described in the field with the converted value;

a decrypting step of decrypting the encrypted data out of the
15   encoded image data, audio data, and the text data included in the data section of the file; and

a decoding step of determining the encoding method used for the data by reference to the field in which the value has been replaced and decoding the decrypted data.
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19.   A program for an encrypting apparatus which encrypts at least one of encoded image data, audio data, and text data, said program causing a computer to execute:

a file reading step of obtaining a file which has a data section
25   including the encoded image data, audio data, and text data and a header section including a header of the data section;

an encrypting step of encrypting at least one of the encoded image data, audio data, and text data included in the data section of the file;

30   a header analyzing step of analyzing the header section of the file and obtaining a value described in a field that is included in the header section to show an encoding method used for data to be

encrypted in said encrypting step;

a header converting step of converting the obtained value according to a predetermined conversion rule and replacing the value described in the field with the converted value; and

5   a file outputting step of outputting a file having a header section including a field in which the value has been replaced and a data section including the encrypted data.

20.   A program for a decrypting apparatus which decrypts
10   encrypted data, the encrypted data being at least one of encoded image data, audio data, and text data, said program causing a computer to execute:

a file reading step of obtaining a file which has a data section including the encoded image data, audio data, and text data and a
15   header section including a header of the data section;

a header analyzing step of analyzing the header section of the file and obtaining a value described in a field that is included in the header section to show an encoding method used for the encrypted data and information regarding encryption;
20   a header converting step of converting the obtained value according to a predetermined conversion rule and replacing the value described in the field with the converted value;

a decrypting step of decrypting the encrypted data out of the encoded image data, audio data, and the text data included in the
25   data section of the file; and

a file outputting step of outputting a file having a header section including a field in which the value has been replaced and a data section including the decrypted data.

30   21.   A program for a data reproducing apparatus which decrypts and decodes encrypted data for reproduction, the encrypted data being at least one of encoded image data, audio data, and text data,

said program causing a computer to execute:

a file reading step of obtaining a file which has a data section including the encoded image data, audio data, and text data and a header section including a header of the data section;

5　　　　　a header analyzing step of analyzing the header section of the file and obtaining a value described in a field that is included in the header section to show an encoding method used for the encrypted data and information regarding encryption;

a header converting step of converting the obtained value

10　according to a predetermined conversion rule and replacing the value described in the field with the converted value;

a decrypting step of decrypting the encrypted data out of the encoded image data, audio data, and the text data included in the data section of the file; and

15　　　　a decoding step of determining the encoding method used for the data by reference to the field in which the value has been replaced and decoding the decrypted data.

22.　　A computer-readable recording medium on which a file is

20　recorded, said file including:

a data section which includes encrypted data, the encrypted data being at least one of encoded image data, audio data, and text data; and

a header section which includes a header of the data section,

25　　　　wherein the header section includes a field showing an encoding method used for the encrypted data and information regarding encryption.